



Re: A Request

Jose Torres to: Barbara Smith
Cc: Philip Dellinger, Ray Leissner

11/13/2012 02:11 PM

From: Jose Torres/R6/USEPA/US
To: "Barbara Smith" <bsmith@goliadcogcd.org>
Cc: Philip Dellinger/R6/USEPA/US@EPA, Ray Leissner/R6/USEPA/US@EPA

Thank you very much for providing a complete set of data on UEC's area permit and PAA-1 applications for the Goliad project. I really appreciate your efforts in locating and transmitting this massive piece of information. I put all the files (all 390 MB) on a CD and shared them with Mr. Ray Leissner, my program coordinator and R6's Aquifer Exemption guru.

We are attempting to determine if a criteria/policy for completing the monitoring ring wells around an in-situ mining operation may be written somewhere. More specifically, we are trying to learn if there is an approved policy allowing the completion of these wells only in an upper segment of the production zone. Unfortunately, none of the UEC generated documents that you sent us seems to address this issue.

I am taking this opportunity to inquire about a TCEQ issued area permit (Area Permit 03075, I believe), the Goliad Project permit. This document may have an appearance similar to that of the one enclosed with this message (a PAA). I am thinking that, since a picture is worth a thousand words, it will make it easier for you to visualize what I am looking for, and that it will make it easier for you to let me know if you may be able to assist with providing a copy of this area permit.

Thank you very much for your attention in this matter, and thank you once again for your efforts in providing the information we have received so far. Have a great week. Sincerely,

José Eduardo Torres - 6WQ-SG



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**Texas Commission on
Environmental Quality**
Austin, Texas

PRODUCTION AREA AUTHORIZATION (PAA) 5
under Area Permit No. UR03060
Alta Mesa In Situ Uranium Mine

AUTHORIZATION to operate Class III
underground injection wells for in situ
recovery of uranium and groundwater restoration

I. Name of Permittee:

- A. Name: Mestefia Uranium, LLC
B. Address: 500 North Shoreline Drive, Suite 700
Corpus Christi, Texas 78401-0326

II. Name of Mine: Alta Mesa In Situ Uranium Mine

III. Standard Provisions:

A. Mine Plan

Permit Area and Production Area Maps (Attachments 1A and 1B)

Attachment 1A shows the general location of PAA1 within the Alta Mesa mine permit and lease areas. Attachment 1B provides a more detailed map of PAA1 bounded by the monitor well ring and with locations of baseline/monitoring wells indicated.

2. Estimated Schedule of Mining and Aquifer Restoration (Attachment 2)

An update of the estimated schedule of the sequence and timing for mining and aquifer restoration shall be provided with each annual report prepared and submitted pursuant to 30 TAC §305.155 and the area permit UR03060 Provision VIII.G.

CONTINUED on Pages 2 through 14

The permittee is authorized to conduct injection activity in accordance with limitations, requirements, and other conditions set forth herein. This authorization is granted subject to the provisions of Area Permit No. UR03060. This authorization will be in effect for ten years from the date of approval of the area permit, or until revocation of the area permit, or amendment of the authorization. If this authorization is appealed and the permittee does not commence any action authorized by this authorization during judicial review, the term will not begin until judicial review is concluded.

ISSUED DATE:

For The Commission

B. Monitor Well and Baseline Wells

1. Monitor Well and Baseline Well Locations (Attachment 1B)
2. Designated Monitor Well and Baseline Well Table (Attachment 3)

Routine water quality sampling according to 30 TAC §331.105 and the area permit URO3060 Provision V.I is required for all designated monitor wells and baseline wells.

C. Baseline Water Quality Table (Attachments 4A-4C)

D. Control Parameter Upper Limits Table (Attachment 5)

If the results of routine sample analysis from a designated monitor well show that the value of any control parameter is equal to or above the values listed in Attachment 5, the operator shall follow all procedures for verification, notification, and remediation according to 30 TAC §§331.105 - 331.106.

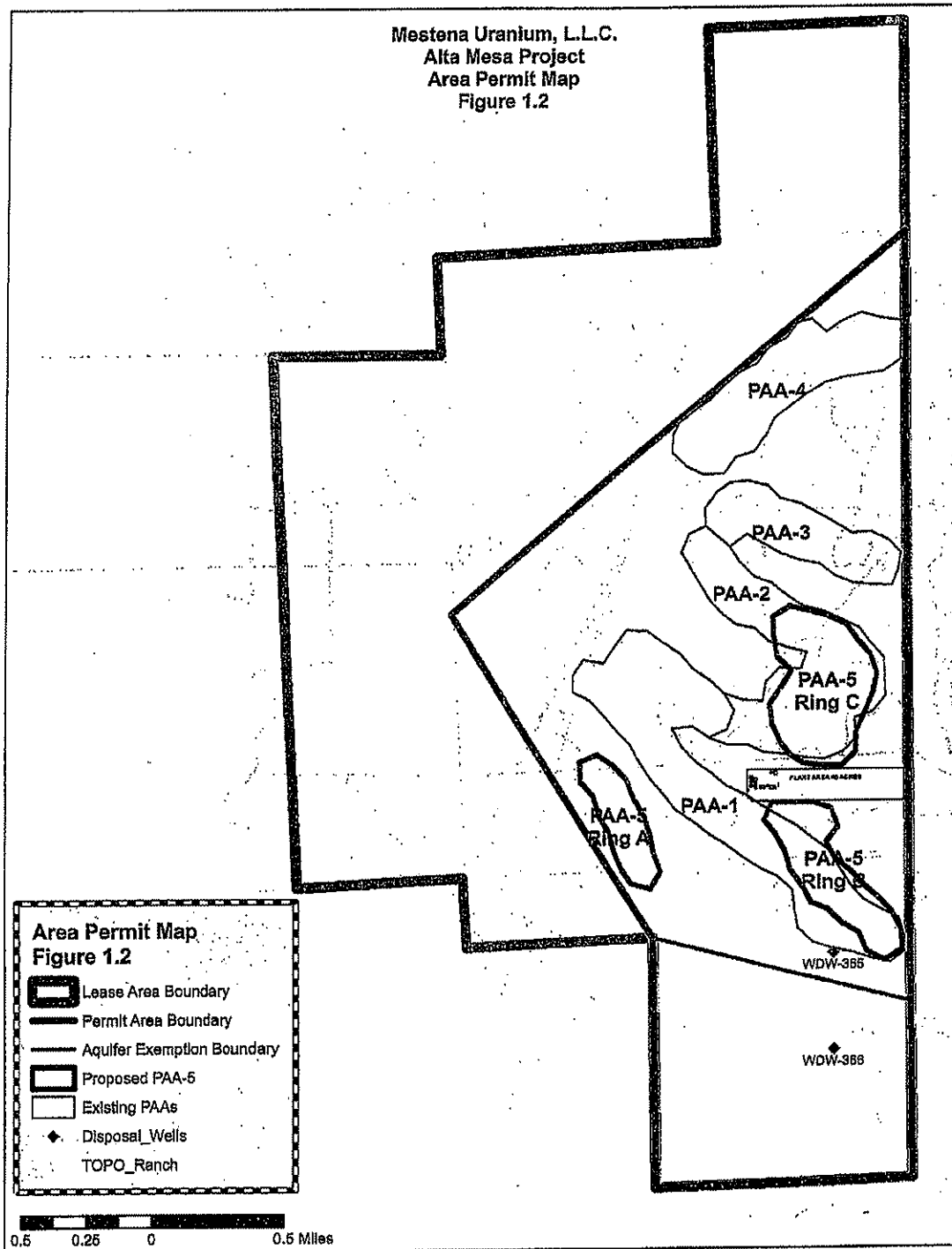
E. Restoration Table (Attachment 6)

As required by 30 TAC §331.107(b) when mining of the production area is completed, the permittee shall notify the Region 14 Office and the executive director. After such notification, the permittee shall proceed with reestablishing groundwater quality in the production area aquifer to a level consistent with the values listed in the Restoration Table in Attachment 6 or obtain an amendment to the Restoration Table according to 30 TAC §331.107(g).

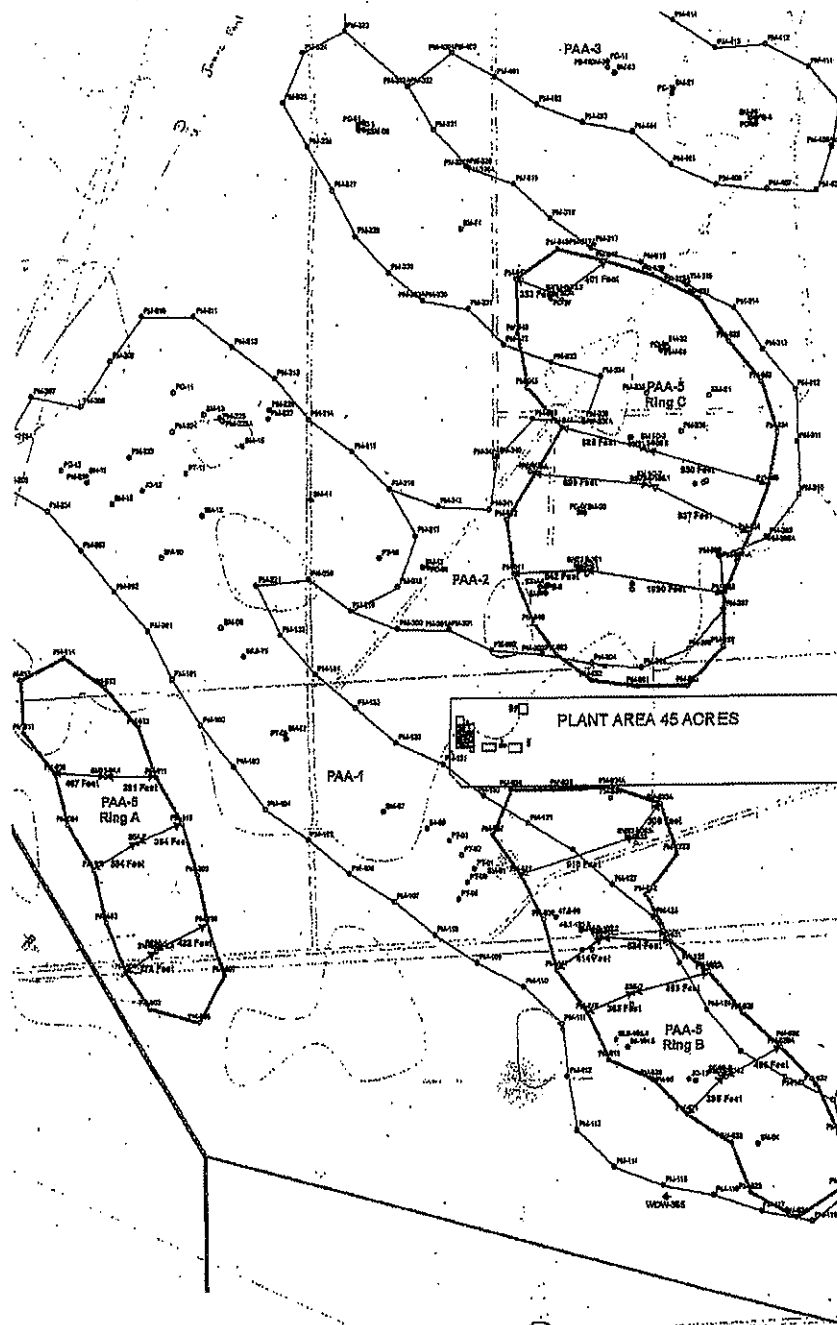
IV. Financial Assurance:

- A. The permittee shall maintain in full force and at all times a performance bond or other form of financial assurance, to provide for proper plugging and abandonment of the wells associated with this Authorization according to 30 TAC §§331.142-331.144 and the area permit URO3060, Provision VII. The financial assurance shall be provided to the Financial Administration Division, Texas Commission on Environmental Quality, Mail Code 214, P.O. Box 13088, Austin, TX 78711-3088 at least 60 days prior to the commencement of drilling operations.

**ATTACHMENT 1A
PERMIT AREA MAP**



**ATTACHMENT 1B
PRODUCTION AREA MAP**



ATTACHMENT 2

ESTIMATED SCHEDULE OF MINING AND GROUNDWATER RESTORATION		
PA1	Production	2005 4 th Quarter to 2009 4 th Quarter
	Groundwater Restoration	2011 4 th Quarter to 2013 3 rd Quarter
PA2	Production	2007 2 nd Quarter to 2012 2 nd Quarter
	Groundwater Restoration	2013 3 rd Quarter to 2015 4 th Quarter
PA3	Production	2009 2 nd Quarter to 2014 2 nd Quarter
	Groundwater Restoration	2016 1 st Quarter to 2017 2 nd Quarter
PA4	Production	2010 2 nd Quarter to 2019 3 rd Quarter
	Groundwater Restoration	2017 2 nd Quarter to 2019 4 th Quarter
PA5	Production	2011 3 rd Quarter to 2019 4 th Quarter
	Groundwater Restoration	2020 1 st Quarter to 2021 4 th Quarter

PA = Production Area

This Mine Plan represents an estimate for the timing for the event listed. The timing of these events is dependent on many factors beyond the control of the permittee including the following:

- 1) timing of the approval of the permits required to mine the various ore bodies;
- 2) the ore bodies response to the lixiviant used for recovery;
- 3) the ultimate economic recovery of uranium from each ore body;
- 4) the sequence of mining the various ore bodies; and
- 5) the response of each ore body to the restoration techniques employed.

**ATTACHMENT 3
 DESIGNATED MONITOR WELL AND BASELINE WELL TABLE**

Monitor Wells					Production Area Baseline Wells (production zone)
Production Zone (monitor well ring)		Non-Production Zone		Lissie Sand 2 nd Overlying Aquifer	
		A Sand 1 st Overlying Aquifer			
Ring A PM-600 PM-605 PM-609 PM-613 PM-601 PM-606 PM-610 PM-614 PM-602 PM-607 PM-611 PM-615 PM-604 PM-608 PM-612 PM-616 PM-604		Ring A S5A-1 S5A-2		Ring A SS5A-1	Ring A BL45.2-68.4 BL58-64.4
Ring B PM-617 PM-623 PM-629 PM-634A PM-618 PM-624 PM-630 PM-635 PM-619 PM-625 PM-631 PM-636 PM-620 PM-626 PM-632 PM-637 PM-621 PM-627 PM-633A PM-638 PM-622 PM-628 PM-633B PM-639		Ring B S5B-1 S5B-2 S5B-3		Ring B SS5B-1 SSM-01	Ring B 35.7-112 46.2-102.2 53.2-105
Ring C PM-640 PM-646 PM-652 PM-658 PM-641 PM-647 PM-653 PM-659 PM-642 PM-648 PM-654 PM-660 PM-643 PM-649 PM-655 PM-661 PM-644 PM-650 PM-656 PM-662 PM-645 PM-651 PM-657A PM-663		Ring C SM5C-1 SM5C-2 SM5C-3 SM5C-4		Ring C SSM4-A SSM5	Ring C BM92.6-99.3 BM81.3-105.8 BM78.8-106.1 BM72.9-101

ATTACHMENT 4A
 BASELINE WATER QUALITY TABLE
 ALTA MESA MINE RING A

Table 10.1 Ring A

Texas Commission on Environmental Quality
 Groundwater Analysis Report Summary
 Baseline Water Quality

Company: Mestena Uranium L.L.C.
 Mine: Alta Mesa
 Permit: URO3060 Prod. Area: PAA-5
 Date Summarized: April 8, 2011

	Parameter	Unit	Non Production Zone (First Overlying Zone)			Production Area						Well I.D. By Area*		
			Low	Average	High	Mine Area**			Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
						Low	Average	High	Low	Average	High		Mine	Prod.
1	Calcium	mg/L	101.0	102.5	104.0	22.5	32.3	43.5	27.1	32.3	36.2	S5A-1	PM-600	45.2-68.4
2	Magnesium	mg/L	31.7	32.00	32.3	7.9	13.0	17.4	8.3	13.1	16.9	S5A-2	through	58-64.4
3	Sodium	mg/L	292.0	296.5	301.0	222.0	235.0	259.0	224.0	232.6	243.0		PM-616	
4	Potassium	mg/L	11.9	13.3	14.7	11.0	18.6	29.1	9.4	13.7	22.0			
5	Carbonate	mg/L	<2	<2	<2	<2	<6	17	10	15	22			
6	Bicarbonate	mg/L	212	219	226	176	207	236	174	190	213			
7	Sulfate	mg/L	57	70	82	1	8	21	5	7	12			
8	Chloride	mg/L	580	580	580	320	354	380	330	342	350			
9	Nitrate-N	mg/L	0.02	0.76	1.49	<0.02	<0.02	0.05	0.10	0.10	0.10			
10	Fluoride	mg/L	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.5			
11	Silica	mg/L	42.7	45.7	48.7	20.3	23.2	28.9	21.8	24.5	28.3			
12	TDS	mg/L	1280	1285	1290	730	785	860	720	750	780			
13	Conductivity	µmhos/cm	1878	1882	1886	1243	1374	1503	1306	1370	1445			
14	Alkalinity	mg/L	212	219	226	182	212	238	187	201	213			
15	pH	Std. Units	7.2		7.3	7.6		8.7	7.7		8.5			
16	Arsenic	mg/L	0.0121	0.0386	0.0651	0.0017	0.0064	0.0100	0.0050	0.0185	0.0500			
17	Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0009	<0.002	0.0005	0.0048	0.0100			
18	Iron	mg/L	0.03	0.10	0.16	<0.02	<0.09	0.30	0.02	0.04	0.06			
19	Lead	mg/L	<0.0001	<0.0002	0.0003	<0.0001	<0.0010	0.0020	0.0005	0.0049	0.0100			
20	Manganese	mg/L	0.225	0.464	0.703	<0.005	<0.006	0.009	0.030	0.030	0.030			
21	Mercury	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	0.001	0.001			
22	Molybdenum	mg/L	<0.01	<0.01	<0.01	<0.01	<0.02	0.07	0.01	0.03	0.05			
23	Selenium	mg/L	<0.0001	<0.001	0.0019	<0.0001	<0.0145	0.0920	0.0001	0.0151	0.0510			
24	Uranium	mg/L	0.0022	0.0028	0.0033	<0.0002	<0.0014	0.0030	0.0088	0.0599	0.2000			
25	Ammonia	mg/L	0.09	0.11	0.13	<0.05	<0.13	0.50	0.18	0.44	0.50			
26	Radium-226	pCi/L	0.78	0.83	0.88	0.61	2.16	5.80	340.00	484.00	680.00			

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

ATTACHMENT 4A
BASELINE WATER QUALITY TABLE
ALTA MESA MINE RING A (cont.)

Table 10.1 Ring A continued

Texas Commission on Environmental Quality
Groundwater Analysis Report Summary
Baseline Water Quality

Company: Mestena Uranium L.L.C.
Mine: Alta Mesa
Permit: UR03060 Prod. Area: PAA-5
Date Summarized: April 8, 2011

	Parameter	Unit	Non Production Zone (2nd Overlying Zone)			Production Area						Well I.D. By Area*		
			Low	Average	High	Mine Area**		High	Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
						Low	Average		Low	Average	High		Mine	Prod
1	Calcium	mg/L	17.2	17.2	17.2							SSSA-1		
2	Magnesium	mg/L	0.3	0.3	0.3									
3	Sodium	mg/L	131.0	131.0	131.0									
4	Potassium	mg/L	19.6	19.6	19.6									
5	Carbonate	mg/L	86	86	86									
6	Bicarbonate	mg/L	<2	<2	<2									
7	Sulfate	mg/L	33	33	33									
8	Chloride	mg/L	120	120	120									
9	Nitrate-N	mg/L	0.11	0.11	0.11									
10	Fluoride	mg/L	1.0	1.0	1.0									
11	Silica	mg/L	41.0	41.0	41.0									
12	TDS	mg/L	430	430	430									
13	Conductivity	umhos/cm	939	939	939									
14	Alkalinity	mg/L	126	126	126									
15	pH	Std. Units	10.9		10.9									
16	Arsenic	mg/L	0.0202	0.0202	0.0202									
17	Cadmium	mg/L	<0.0001	<0.0001	<0.0001									
18	Iron	mg/L	0.09	0.09	0.09									
19	Lead	mg/L	0.0021	0.0021	0.0021									
20	Manganese	mg/L	<0.005	<0.005	<0.005									
21	Mercury	mg/L	<0.0002	<0.0002	<0.0002									
22	Molybdenum	mg/L	0.02	0.02	0.02									
23	Selenium	mg/L	0.0023	0.0023	0.0023									
24	Uranium	mg/L	0.0012	0.0012	0.0012									
25	Ammonia	mg/L	1.33	1.33	1.33									
26	Radium-226	pCi/L	5.10	5.10	5.10									

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

Texas Commission on Environmental Quality
Groundwater Analysis Report Summary
Baseline Water Quality

Table 10.2 Ring B

Company: Mestena Uranium L.L.C.
Mine: Alta Mesa
Permit: UR03060 Prod. Area: PAA-5
Date Summarized: April 8, 2011

Parameter	Unit	Non Production Zone (First Overlying Zone)			Production Area						Well I.D. By Area*		
		Low	Average	High	Mine Area**			Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
					Low	Average	High	Low	Average	High		Mine	Prod.
1 Calcium	mg/L	37.0	77.7	99.1	28.1	40.8	54.3	35.2	40.1	43.7	S5B-1	PM-617	35.7-112
2 Magnesium	mg/L	9.9	22.6	30.2	4.1	14.2	19.7	6.0	10.0	15.3	S5B-2	through	46.2-102.2
3 Sodium	mg/L	149.0	243.3	297.0	209.0	225.2	256.0	217.0	224.6	231.0	S5B-3	PM-632	53.2-105
4 Potassium	mg/L	14.8	15.9	16.9	9.7	15.4	31.2	11.4	20.0	25.3		PM-633A	
5 Carbonate	mg/L	<2	<2	<2	<2	<7	26	9	15	23		PM-633B	
6 Bicarbonate	mg/L	199	221	250	117	205	247	102	168	209		PM-634A	
7 Sulfate	mg/L	32	67	87	86	96	115	92	99	109		PM-635	
8 Chloride	mg/L	120	400	560	230	273	370	240	254	270		through	
9 Nitrate-N	mg/L	1.59	3.40	4.78	<0.02	<0.14	1.75	0.10	0.13	0.20		PM-639	
10 Fluoride	mg/L	0.3	0.7	1.3	0.4	0.5	0.6	0.4	0.5	0.6			
11 Silica	mg/L	27.5	37.4	46.4	22.2	25.5	29.1	20.9	24.5	26.2			
12 TDS	mg/L	540	1023	1280	720	807	930	680	770	810			
13 Conductivity	µmhos/cm	870	1481	1855	1116	1268	1546	1180	1268	1330			
14 Alkalinity	mg/L	199	221	250	141	212	253	119	184	230			
15 pH	Std. Units	7.2		7.8	7.6		9.2	8.4		9.1			
16 Arsenic	mg/L	0.0176	0.0665	0.1550	<0.0017	<0.0053	0.0146	0.0030	0.0183	0.0500			
17 Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	0.0020	0.0005	0.0024	0.0100			
18 Iron	mg/L	<0.02	<0.567	1.66	<0.02	<0.04	0.12	0.03	0.05	0.05			
19 Lead	mg/L	<0.0001	0.0006	0.0008	<0.0001	<0.0003	0.0020	0.0002	0.0023	0.0100			
20 Manganese	mg/L	<0.005	0.624	0.659	<0.005	<0.012	0.061	0.030	0.030	0.030			
21 Mercury	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	0.0010	0.0010	0.0010			
22 Molybdenum	mg/L	<0.01	0.01	0.01	<0.01	<0.16	1.64	0.04	0.09	0.20			
23 Selenium	mg/L	0.0034	0.0040	0.0051	<0.0001	<0.0039	0.0490	0.0003	0.0024	0.0042			
24 Uranium	mg/L	0.0034	0.0095	0.0164	<0.0004	<0.0163	0.0986	0.0338	0.0991	0.2000			
25 Ammonia	mg/L	0.06	0.55	1.50	<0.05	<0.05	0.10	0.07	0.25	0.50			
26 Radium-226	pCi/L	0.72	1.07	1.40	0.31	8.14	44.00	52.00	369.80	860.00			

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

ATTACHMENT 4B
BASELINE WATER QUALITY TABLE
ALTA MESA MINE RING B

ATTACHMENT 4B
 BASELINE WATER QUALITY TABLE
 ALTA MESA MINE RING B (cont.)

Table 10.2 Ring B continued

Texas Commission on Environmental Quality
 Groundwater Analysis Report Summary
 Baseline Water Quality

Company: Mestena Uranium L.L.C.
 Mine: Alta Mesa
 Permit: UR03060 Prod. Area: PAA-5
 Date Summarized: April 8, 2011

	Parameter	Unit	Non Production Zone (2nd Overlying Zone)			Production Area						Well I.D. By Area*		
			Low	Average	High	Mine Area**			Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
						Low	Average	High	Low	Average	High		Mine	Prod
1	Calcium	mg/L	73.0	94.5	116.0							SS5B-1		
2	Magnesium	mg/L	18.4	24.7	31.0							SSM-01		
3	Sodium	mg/L	221.0	240.5	260.0									
4	Potassium	mg/L	17.0	19.7	22.3									
5	Carbonate	mg/L	<2	<2	<2									
6	Bicarbonate	mg/L	285	348	411									
7	Sulfate	mg/L	73	102	130									
8	Chloride	mg/L	240	302	363									
9	Nitrate-N	mg/L	0.40	1.30	2.20									
10	Fluoride	mg/L	0.5	0.7	0.8									
11	Silica	mg/L	34.8	34.9	35.0									
12	TDS	mg/L	1090	1090	1090									
13	Conductivity	umhos/cm	1488	1679	1870									
14	Alkalinity	mg/L	234	323	411									
15	pH	Std. Units	7.1		7.9									
16	Arsenic	mg/L	0.0170	0.0910	0.1650									
17	Cadmium	mg/L	<0.0001	<0.0001	<0.0001									
18	Iron	mg/L	<0.01	0.79	0.79									
19	Lead	mg/L	<0.0001	<0.002	0.0020									
20	Manganese	mg/L	0.010	0.530	1.050									
21	Mercury	mg/L	<0.0001	<0.0001	<0.0001									
22	Molybdenum	mg/L	<0.01	0.04	0.04									
23	Selenium	mg/L	0.0027	0.0039	0.0050									
24	Uranium	mg/L	0.0070	0.0102	0.0133									
25	Ammonia	mg/L	<0.01	<0.12	0.22									
26	Radium-226	pCi/L	2.60	2.90	3.20									

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

ATTACHMENT 4C
BASELINE WATER QUALITY TABLE
ALTA MESA MINE RING C

Table 10.3 Ring C

Texas Commission on Environmental Quality
Groundwater Analysis Report Summary
Baseline Water Quality

Company: Mestena Uranium L.L.C.
Mine: Alta Mesa
Permit: UR03060 Prod. Area: PAA-5
Date Summarized: April 8, 201

	Parameter	Unit	Non Production Zone (First Overlying Zone)			Production Area						Well ID. By Area*		
			Low	Average	High	Mine Area**			Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
						Low	Average	High	Low	Average	High		Mine	Prod
1	Calcium	mg/L	94.4	122.3	162.0	10.3	42.8	55.3	10.5	20.1	29.3	SMSC-1	PM-640	92.6-99.3
2	Magnesium	mg/L	13.6	35.5	63.4	3.9	14.2	19.8	1.0	7.6	14.1	SMSC-2	through	81.3-105.8
3	Sodium	mg/L	288.0	342.3	484.0	200.0	220.3	239.0	214.0	221.4	233.0	SMSC-3	PM-642	78.8-106.1
4	Potassium	mg/L	18.1	26.2	32.7	10.3	16.6	26.2	16.3	24.3	38.3	SMSC-4	PM-643A	72.9-101
5	Carbonate	mg/L	<2	<2	<2	<2	<6	41	6	33	105		PM-644	
6	Bicarbonate	mg/L	109	240	521	114	243	326	94	187	222		through	
7	Sulfate	mg/L	3	98	220	37	82	115	42	53	66		PM-656	
8	Chloride	mg/L	330	613	1010	210	246	290	240	248	260		PM-657A	
9	Nitrate-N	mg/L	0.03	1.78	3.47	0.02	0.54	2.88	0.10	0.10	0.10		PM-658	
10	Fluoride	mg/L	0.4	0.5	0.7	0.4	0.4	0.5	0.5	0.5	0.6		through	
11	Silica	mg/L	30.7	37.0	44.6	20.3	25.2	28.9	22.3	24.2	26.6		PM-663	
12	TDS	mg/L	1230	1608	2280	620	771	850	680	702	730			
13	Conductivity	µmhos/cm	1703	2273	3550	1085	1285	1544	1185	1223	1260			
14	Alkalinity	mg/L	109	240	521	155	248	326	199	219	235			
15	pH	Std. Units	7.6		9.1	7.2		9.2	8.0		9.6			
16	Arsenic	mg/L	0.0097	0.0373	0.1140	0.0031	0.0288	0.0777	0.0100	0.0200	0.0500			
17	Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0003	0.0005	0.0062	0.0100			
18	Iron	mg/L	<0.02	<0.11	0.19	<0.02	<0.27	1.49	0.02	0.04	0.05			
19	Lead	mg/L	<0.0001	<0.0005	0.0013	<0.0001	<0.0005	0.0030	0.0005	0.0062	0.0100			
20	Manganese	mg/L	<0.005	<0.024	0.075	<0.005	<0.116	0.471	0.030	0.030	0.030			
21	Mercury	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0010	0.0010	0.0010			
22	Molybdenum	mg/L	<0.01	0.03	0.04	<0.01	<0.04	0.48	0.01	0.21	0.38			
23	Selenium	mg/L	0.0019	0.0069	0.0119	<0.0004	<0.0047	0.0272	0.0040	0.0033	0.0100			
24	Uranium	mg/L	0.0036	0.0135	0.0363	0.0010	0.0097	0.1060	0.0090	0.0659	0.1260			
25	Ammonia	mg/L	0.06	0.19	0.57	<0.02	<0.06	0.13	0.06	0.41	0.50			
26	Radium-226	pCi/L	1.60	7.13	16.00	0.64	5.40	63.00	24.00	139.40	270.00			

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

ATTACHMENT 4C
BASELINE WATER QUALITY TABLE
ALTA MESA MINE RING C (cont.)

Table 10.3 Ring C continued

Texas Commission on Environmental Quality
Groundwater Analysis Report Summary
Baseline Water Quality

Company: Mestena Uranium L.L.C.
Mine: Alta Mesa
Permit: UR03060 Prod. Area: PAA-5
Date Summarized: April 8, 201

	Parameter	Unit	Non Production Zone (2nd Overlying Zone)			Production Area						Well I.D. By Area*		
			Low	Average	High	Mine Area**			Production Area (Baseline Wells)			Non Prod. Zone	Prod. Zone	
						Low	Average	High	Low	Average	High		Mine	Prod
1	Calcium	mg/L	23.0	33.5	44.0							SSM4-A		
2	Magnesium	mg/L	0.7	10.8	21.0							SSM-5		
3	Sodium	mg/L	310.0	317.5	325.0									
4	Potassium	mg/L	29.0	60.5	92.0									
5	Carbonate	mg/L	0	<1	1									
6	Bicarbonate	mg/L	133	159	184									
7	Sulfate	mg/L	42	97	152									
8	Chloride	mg/L	432	460	488									
9	Nitrate-N	mg/L	0.3	0.9	1.4									
10	Fluoride	mg/L	0.49	0.64	0.79									
11	Silica	mg/L	5	17	29									
12	TDS	mg/L	1060	1080	1100									
13	Conductivity	umhos/cm	1043	1567	2090									
14	Alkalinity	mg/L	109	131	153									
15	pH	Std. Units	8.2		8.4									
16	Arsenic	mg/L	0.001	0.005	0.008									
17	Cadmium	mg/L	<0.0001	<0.0001	<0.0001									
18	Iron	mg/L	<0.01	0.02	0.02									
19	Lead	mg/L	<0.001	<0.001	<0.001									
20	Manganese	mg/L	<0.01	<0.01	<0.01									
21	Mercury	mg/L	<0.0002	<0.0002	<0.0002									
22	Molybdenum	mg/L	<0.1	0.1	0.1									
23	Selenium	mg/L	0.002	0.003	0.004									
24	Uranium	mg/L	0.002	0.005	0.007									
25	Ammonia	mg/L	<0.1	0.3	0.4									
26	Radium-226	pCi/L	5.80	5.95	6.10									

* List the identification numbers of wells used to obtain the high and low values for each parameter.

** Perimeter Monitor Wells

**ATTACHMENT 5
 CONTROL PARAMETER UPPER LIMITS TABLE**

Production Zone (B Sand)			
Control Parameter	Ring A	Ring B	Ring C
Chloride, mg/l	475	463	388
Conductivity, μ mhos/cm	1879	1933	1930

Non-Production Zones						
	A Sand 1st Overlying Aquifer			Lissie Sand 2nd Overlying Aquifer		
Control Parameter	Ring A	Ring B	Ring C	Ring A	Ring B	Ring C
Chloride, mg/l	725	700	1263	150	454	610
Conductivity, μ mhos/cm	2358	2319	4438	1174	2338	2613

ATTACHMENT 6
RESTORATION TABLE

<u>Parameter</u>	<u>Unit</u>	<u>Ring A</u>	<u>Ring B</u>	<u>Ring C</u>
Calcium	mg/L	32.3	40.1	20.1
Magnesium	mg/L	13.1	10.0	7.6
Sodium	mg/L	232.6	224.6	221.4
Potassium	mg/L	13.7	20.0	24.3
Carbonate	mg/L	15	15	33
Bicarbonate	mg/L	190	168	187
Sulfate	mg/L	7	99	53
Chloride	mg/L	342	254	248
Nitrate-N	mg/L	0.10	0.13	0.10
Fluoride	mg/L	0.5	0.5	0.5
Silica	mg/L	24.5	24.5	24.2
TDS	mg/L	750	770	702
Conductivity	umhos/cm	1370	1268	1223
Alkalinity	mg/L as CaCO ₃	201	184	219
pH	Standard Units	7.7-8.5	8.4-9.1	8.0-9.6
Arsenic	mg/L	0.0185	0.0183	0.0200
Cadmium	mg/L	0.0048	0.0024	0.0062
Iron	mg/L	0.04	0.05	0.04
Lead	mg/L	0.0049	0.0023	0.0062
Manganese	mg/L	0.030	0.030	0.030
Mercury	mg/L	0.001	0.0010	0.0010
Molybdenum	mg/L	0.03	0.09	0.21
Selenium	mg/L	0.0151	0.0024	0.0033
Uranium	mg/L	0.0599	0.0991	0.0659
Ammonia	mg/L	0.44	0.25	0.41
Radium-226	pCi/L	484.00	369.80	139.4

April 26, 2011

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Description of Application

Applicant: Mestefia Uranium, LLC's (Mestefia), Alta Mesa *In Situ* Uranium Mining Project Proposed Production Area Authorization (PAA) 5 under Area Permit No. UR03060.

Location: The Alta Mesa *in situ* uranium mine is located in Brooks County approximately 23 miles southwest of Falfurias, Texas, about 13 miles west of the intersection of U.S. Highway 281 and Ranch-to-Market Road 755. The Alta Mesa Mine is accessible from County Road 314.

General: The proposed operations at this facility include *in situ* recovery of uranium and aquifer restoration.

Request: Mestefia submitted an application to the Texas Commission on Environmental Quality (TCEQ) dated September 10, 2010 for a new PAA at the Alta Mesa Mine. The application was declared administratively complete on September 20, 2010.

Authority: Texas Water Code §27.011 requires the area permit (mining permit). A draft PAA required under provisions of the area permit has been prepared in accordance with applicable requirements of 30 TAC Chapters 281, 305, and 331.

Technical Information

The production zone is Sand B of the Pliocene Goliad Sand. Sand B is at an elevation ranging from approximately 25 to 50 feet below mean sea level in the proposed production area. Hydrologic pump tests have determined that no communication exists between the production zone and the overlying and underlying aquifers. Clay aquitards protect these overlying and underlying aquifers from *in situ* mining in the mineralized sands.

The mining procedure involves injection of native groundwater, carbon dioxide, and oxygen into the uranium bearing sands through a pattern of injection wells. The uranium is oxidized and dissolved by the leaching solution. The solution is then pumped from a pattern of recovery wells, to the processing plant where uranium is extracted by ion exchange. Finally, the water is reconstituted with oxidizing agents and is recycled to the field for reinjection. A small amount of water is continuously withdrawn from the overall operation for disposal. This produces a hydraulic sink causing ground water to flow toward the production area. Monitor wells will be installed for each production area to provide horizontal and vertical surveillance of groundwater quality and to monitor confinement of the mining solution in the production zone. Mining is planned to start in July of 2011. Mestefia will be required to conduct restoration of the production zone groundwater once mining is complete. Aquifer restoration is expected to begin in January of 2020 in depleted areas and be completed in December of 2021.

The base of the underground source of drinking water in the mine area is at approximately 2120 feet below mean sea level. However, in accordance with the requirements of §331.13, the interval from 100 feet above mean sea level to 300 feet below mean sea level has been designated as an exempted aquifer. This exemption allows Mestefia to inject leaching solutions into the exempted aquifer for the purpose of extracting uranium.

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

The permittee is required to secure and maintain a performance bond, or other financial assurance mechanism, to provide for the proper plugging and abandonment of all injection, production and monitor wells on the site. The financial assurance for plugging of wells regulated by PAA5 is \$280,622 in 2010 dollars. This specification will be reviewed annually and may be altered at a future date to reflect the prevailing general economic conditions.

Process for Reaching a Final Decision and Opportunities for Public Participation

Once the proposed PAA is completed, it is sent to the TCEQ Office of the Chief Clerk for public notice. Mailed and newspaper notice of the application and executive director's preliminary decision are provided in accordance with 30 TAC §39.653(c) with instructions for submitting public comments and requesting a public meeting. Written public comments and requests for a public meeting must be submitted to the Office of the Chief Clerk within 30 days from the date of publication of the newspaper notice.

The executive director will consider public comments in making a final decision on this application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. The response to comments will include the executive director's decision on the application and will provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.

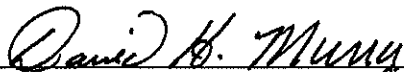
A contested case hearing will only be granted based on disputed issues of fact that are relevant and material to the commission's decision on the application on issues that were raised during the public comment period and not withdrawn. The executive director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the executive director will not issue final approval of the production area authorization (PAA) and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled commission meeting. If hearing requests are granted, the hearings will be conducted by the State Office of Administrative Hearings. Decisions regarding the PAA may be reconsidered in response to a Motion for Rehearing or a Motion for Reconsideration and by appeal to a District Court in Travis County.

Preliminary Decision

The executive director has made a preliminary decision that the proposed PAA, if issued, meets all statutory and regulatory requirements.

The proposed PAA does not authorize variances or alternatives to required standards.

Prepared by:



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Reviewed by:



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